California Beverage Container Recycling

Calendar Year 2002 Biannual Report of Beverage Container Sales, Returns, Redemption, and Recycling Rates

May 10, 2003

Contents

Executive Summary

California's beverage container recycling program (Program) continues to change and grow. In January of 2000, significant changes occurred within the Program due to Senate Bill 332 (Chapter 815, Statutes of 1999) specifically adding noncarbonated fruit drinks, coffee and tea drinks, noncarbonated water, and sport drinks to the Program. In addition, it applied the California Redemption Value (CRV) to beverages sold in all of the seven plastic resin types. In January of 2001, Senate Bill 1906 (Chapter 731, Statutes of 2000) added noncarbonated soft drinks and vegetable juices in beverage containers of 16 oz. or less.

In 2002 we are still seeing the effects of these changes in the law, along with normal growth, as the sales of CRV beverage containers continue to climb. Total sales for all material types exceeded 17.5 billion containers in 2001. In 2002 continued growth resulted in a 4 percent increase with total sales reaching just over 18 billion beverage containers.

As sales of all beverage containers have increased 4 percent, the rate of CRV beverage containers recycled has also increased by 1 percent to an all time high of 10.6 billion containers.

Background of the California Beverage Container Recycling Program

The Program is unique among the states that have a beverage container returns system. In other deposit bottle states, the cans and bottles are returned to the store from which the containers were purchased. Californians enjoy a more convenient form of container recovery with nearly 3,000 recycling opportunities statewide. The recycling system in California provides a convenient and efficient way to recycle beverage containers, and also is used as a source of non-tax dollar funding for various recycling and litter reduction programs throughout the State.

The Division of Recycling (Division), within the Department of Conservation (Department) administers the Program. The Program, enacted by the passage of the California Beverage Container Recycling and Litter Reduction Act (Act) in 1986, is aimed at making beverage container recycling integral to the California economy. The primary goal of the Program is to achieve and maintain high recycling rates for each beverage container type included in the Program, thereby reducing the beverage container component of litter in the state.

In January of 2000, significant changes occurred within the Program due to SB 332, specifically adding noncarbonated fruit drinks, coffee and tea drinks, noncarbonated water, and sport drinks to the Program. For the first time, CRV applied to beverages sold in all of the seven plastic resin types. In January of 2001, SB 1906 added non-carbonated soft drinks and vegetable juices in beverage containers of 16 oz. or less.

The Program involves recycling centers, beverage manufacturers and distributors, retail dealers, local conservation corps, and other Program participants to ensure Californians have convenient opportunities to recycle their beverage containers. Units within the Division are responsible for participant certification and registration, regulatory compliance, grant funding distribution, as well as technical and educational assistance to other industries and groups involved in beverage container recycling.

California's beverage container recycling program now includes over 18 billion containers of which over 10.6 billion were returned for recycling in 2002. The CRV, the two and one-half cents consumers pay when they purchase beverages, now applies to more containers than ever before. The goal of the Program is to achieve an 80 percent recycling rate for all aluminum, glass, plastic, and bimetal beverage containers sold in California.

Beverage containers covered by the Act include those filled with carbonated mineral and soda water and other similar carbonated soft drinks, noncarbonated soft drinks, wine coolers and distilled spirit coolers, beer and malt beverages, noncarbonated water including noncarbonated mineral water, sport drinks, coffee and tea drinks, vegetable juice in beverage containers 16 oz. or less, carbonated and noncarbonated fruit drinks that contain any percentage of fruit juice, and 100 percent fruit juices that are packaged in beverage containers less than 46 oz. in volume. The Program does not cover any beverage container product type that is not specifically included by the Act.

The Program is funded through redemption payments made to the Department by beverage distributors on each beverage container sold in the state. Redemption payment revenues are deposited in the California Beverage Container Recycling Fund (Fund). Payments are made out of the Fund to consumers in the form of CRV when they return empty beverage containers to certified recycling centers.

How Information Is Gathered

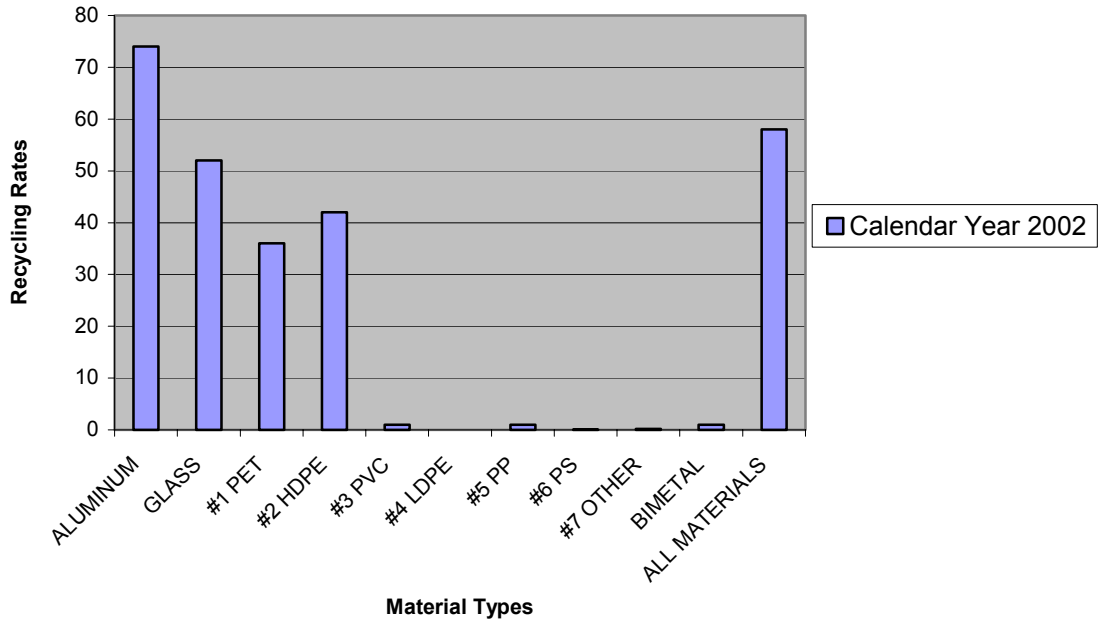
The Department gathers beverage container sales and returns information directly from Program participants. This information is subject to audit, and therefore considered reliable in depicting accurate recycling rates.

Sales information is gathered from distributors when they pay the redemption payment of two and one-half cents for each container under twenty-four fluid ounces and five cents for containers twenty-four fluid ounces or greater.

Recyclers provide the Department with returns information. As consumers return empty beverage containers through the various recycling systems, the recyclers get paid for the refund value they disbursed. The claims for payment by recyclers provide the quantities of beverage container materials actually received. This volumetric information is stated in pounds by material type and is converted into container count by staff within the Department.

Calculation of recycling rates is straightforward. For each material type, dividing the volume of containers returned by the volume of containers sold yields the recycling rate. The calculation is performed bi-annually. The first calculation is performed for the period running from January through June and the second calculation is performed for the period July through December. Combining the sales and returns calculations from the two periods provides the calendar year recycling rate. Chart 1. Calendar Year 2002 Recycling Rates provides the calendar year 2002 recycling rates by material type.

Chart 1. Calendar Year 2002 Recycling Rates



Comparative Analysis of Sales, Returns, Postfilled and Redemption and Recycling Rates

Table 1a. Changes in Sales, Returns and Rates for the July through December 2001 and 2002 Periods provides the percent change in sales and returns of CRV and postfilled containers, and the change in actual percentage points for redemption and recycling rates for the periods of July through December of 2001 and 2002.

Table 1a. - Changes in Sales, Returns and Rates for the July through December 2001 And 2002 Periods

	% Change Sales	% Change CRV Returns	% Change Postfilled Returns	Change in Redemption Rate Points	Change in Recycling Rate Points
Aluminum	-2%	-2%	12%	0	0
Glass	-2%	-7%	-18%	-4	-3
#1 PET	16%	15%	-11%	-1	0
#2 HDPE	-9%	-2%	-5%	5	3
#3 PVC	19%	-77%	51%	-1	-2
#4 LDPE	-54%	-79%	-90%	0	0
#5 PP	150%	25%	-2%	-2	0
#6 PS	17%	1120%	-30%	0	0
#7 OTHER	58%	208%	229%	0	0
Bimetal	17%	86%	66%	1	1
All Materials	2%	-1%	-9%	-2	-2

Table 1b. Changes in Sales, Returns and Rates for Calendar Years 2001 and 2002 provides the percent change in sales and returns of CRV and postfilled containers, and the change in actual percentage points for redemption and recycling rates for the calendar years of 2001 and 2002.

Table 1b. - Changes in Sales, Returns and Rates for Calendar Years 2001 and 2002

	% Change Sales	% Change CRV Returns	% Change Postfilled Returns	Change in Redemption Rate Points	Change in Recycling Rate Points
Aluminum	0%	-1%	14%	-1	-1
Glass	-1%	-4%	-13%	-3	-2
#1 PET	17%	18%	-6%	-1	0
#2 HDPE	-7%	2%	-2%	8	3
#3 PVC	0%	-61%	35%	-1	0
#4 LDPE	-3%	-75%	-90%	0	0
#5 PP	115%	-52%	-17%	-6	-6
#6 PS	47%	-33%	-34%	0	0
#7 OTHER	89%	108%	4%	0	0
Bimetal	18%	50%	-5%	1	0
All Materials	4%	1%	-6%	-2	-2

In presenting the results in terms of percent change, it is important to provide an explanation to assist in interpretation of the data. For example, in data reported for plastics #3 through #7 there are indications of very high percentages of increase or decrease in sales, returns, and postfilled container returns. Although the percentages determined may be very high, the actual numbers of beverage containers represented may be quite limited. The sales and return volumes for these material types are limited, thus any change in sales based on as little as one manufacturer changing container types or transactions of volumes that may have been stockpiled until an adequate amount was collected for efficient shipping, may have significant impacts on the percentage of change calculated.

The comparative analysis between the periods of July and December 2001 and 2002 and the calendar years of 2001 and 2002 by material type is as follows:

Aluminum

Aluminum sales decreased 2 percent and returns decreased 2 percent. Postfilled container returns increased 12 percent. Redemption and recycling rates stayed the same at 70 percent. The 2001 and 2002 comparison shows sales remained stable, returns decreased 1 percent and postfilled container returns increased 14 percent. Both the redemption and recycling rate decreased 1 percentage point.

Glass
Glass sales decreased 2 percent and returns decreased 7 percent. Postfilled container returns decreased 18 percent. The redemption rate decreased 4 percentage points and the recycling rate decreased 3 percentage points. The 2001 and 2002 comparison shows sales decreased 1 percent, redemption decreased 4 percent and postfilled container returns decreased 13 percent. The redemption rate decreased 3 percentage points and the recycling rate decreased 2 percentage points.

#1 PET
PET sales increased 16 percent and returns increased 15 percent. Postfilled container returns decreased 11 percent. There was a 1 percentage point decrease in the redemption rate and no change in the recycling rate. The 2001 and 2002 comparison shows sales increased 17 percent, redemption increased 18 percent and postfilled container returns decreased 6 percent. The redemption rate decreased 1 percentage point and the recycling rate remained the same.

#2 HDPE
HDPE sales decreased 9 percent and returns decreased 2 percent. Postfilled container returns decreased 5 percent. The redemption rate increased 5 percentage points and the recycling rate increased 3 percentage points. The 2001 and 2002 comparison shows sales decreased 7 percent, redemption increased 2 percent and postfilled container returns decreased 2 percent. The redemption rate increased 8 percentage points and the recycling rate increased 3 percentage points. The redemption rate rises above 100 percent when there are a large number of postfilled containers. The calculation includes not only the CRV containers that are recycled, but also a portion of the postfilled containers. Since there are nearly twice as many postfilled containers returned as CRV containers, the numerator of the equation becomes larger than the denominator, which is only CRV sales data, and you get a percentage over 100.

#3 PVC
PVC sales increased 19 percent and returns decreased 77 percent. Postfilled container returns increased 51 percent. The redemption rate decreased 1 percentage point and the recycling rate decreased 2 percentage points. The 2001 and 2002 comparison shows sales remained stable, redemption decreased 61 percent and postfilled container returns increased 35 percent. The redemption rate decreased 1 percentage point and the recycling rate remained the same.

#4 LDPE
LDPE sales decreased 54 percent and returns decreased 79 percent. Postfilled container returns decreased 90 percent. The redemption rate and the recycling rate remained the same. The 2001 and 2002 comparison shows sales decreased 3 percent, redemption decreased 75 percent and postfilled container returns decreased 90 percent. There was no significant change in the redemption and recycling rate.

#5 PP
PP sales increased 150 percent and returns increased 25 percent. Postfilled container returns decreased 2 percent. The redemption rate decreased 2 percentage points and the recycling rate remained the same. The 2001 and 2002 comparison shows sales increased 115 percent, redemption decreased 52 percent and postfilled container returns decreased 17 percent. Both the redemption and recycling rate decreased 6 percentage points.

#6 PS
PS sales increased 17 percent and returns increased 1120 percent. Postfilled container returns decreased 30 percent. This resulted in no change in the redemption and recycling rates. The 2001 and 2002 comparison shows sales increased 47 percent, redemption decreased 33 percent and postfilled container returns decreased 34 percent. There was no significant change in the redemption and recycling rate.

#7 OTHER
OTHER sales increased 58 percent and returns increased 208 percent. Postfilled container returns increased by 229 percent. This resulted in no change in the redemption and recycling rates. The 2001 and 2002 comparison shows sales increased 89 percent, redemption increased 108 percent and postfilled container returns decreased 4 percent. There was no significant change in the redemption and recycling rate.

BIMETAL
Bimetal sales increased 17 percent and returns increased 86 percent. Postfilled container returns increased by 66 percent. This resulted in a 1 percentage point increase in both the redemption and recycling rates. The 2001 and 2002 comparison shows sales increased 18 percent, redemption increased 50 percent and postfilled container returns decreased 5 percent. The redemption rate increased 1 percentage point and the recycling rate remained the same.

ALL MATERIALS
All Materials sales increased 2 percent and returns decreased 1 percent. Postfilled container returns decreased 9 percent. The biannual recycling rate for All Materials decreased 2 percentage points to 54 percent. The redemption rate also decreased 2 percentage points to 56 percent. The 2001 and 2002 comparison shows sales increased 4 percent, redemption increased 1 percent and postfilled container returns decreased 6 percent. Both the redemption and recycling rate dropped 2 percentage points.

Chart #2a. Comparison of Recycling Rates for the July through December 2001 and 2002 Periods below compares the recycling rates for the July through December 2001 and 2002 periods.

Chart 2a. Comparison of Recycling Rates for the July through December 2001 and 2002 Periods

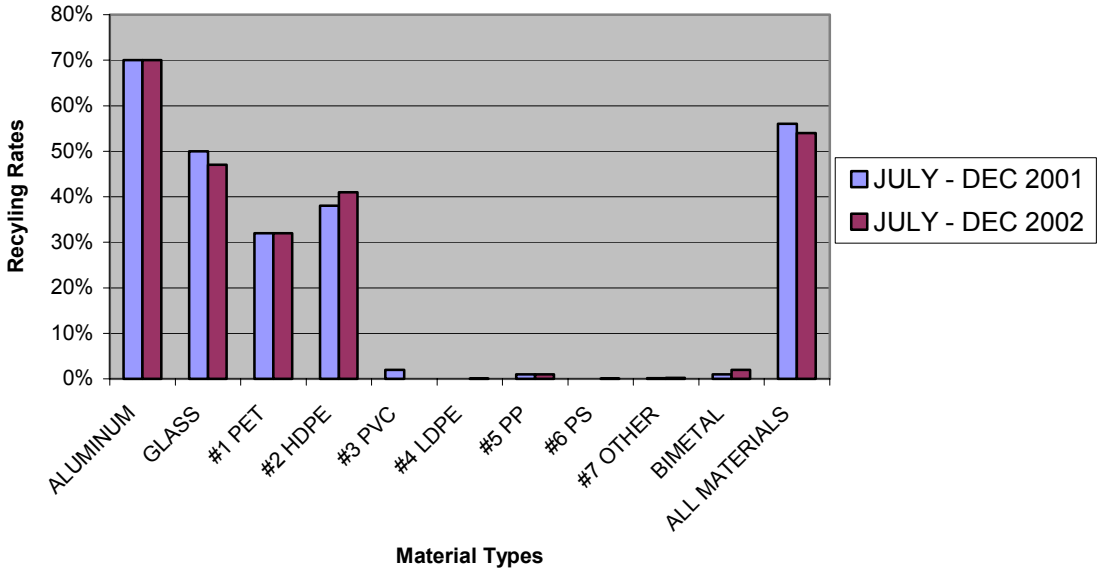
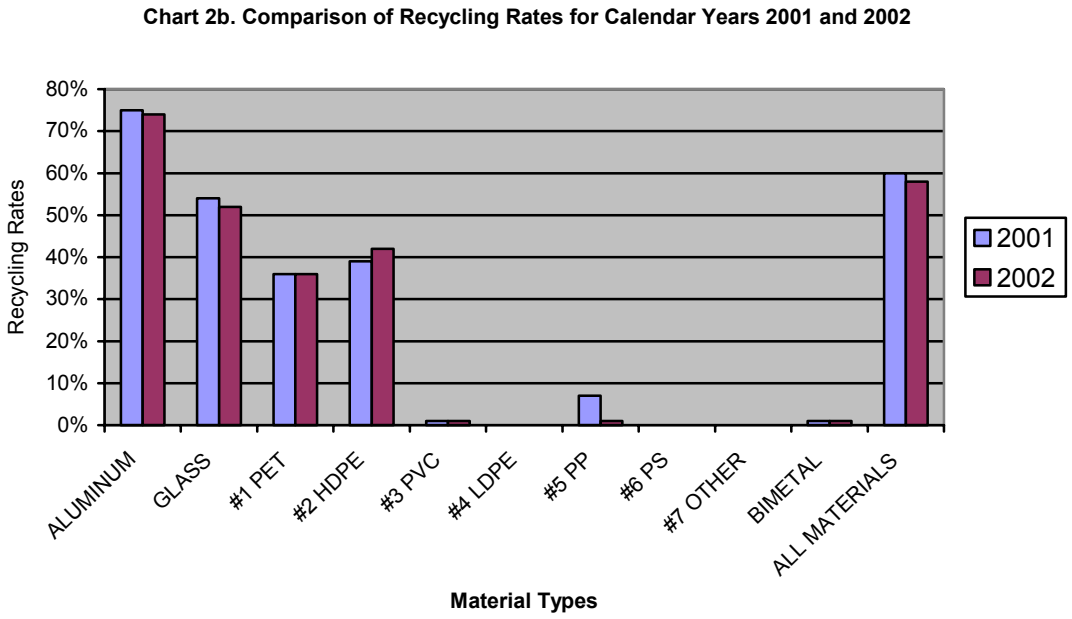


Chart #2b. Comparison of Recycling Rates for Calendar Years 2001 and 2002



Participant Analysis by Material Type

Annually the Division does an analysis of participant shares. This analysis provides the percentage of returns of CRV and postfilled material by participant type. Most material types are redeemed mainly at recycling centers except for #2 HDPE which has a larger percentage collected through curbside programs. In 2001 #5 PP, #7 Other and Bimetal were almost exclusively collected at recycling centers. In 2002 we see that 32% of #5 PP, 14% of #7 Other, and 2% of Bimetal is now collected at curbsides.

Table 2. CRV Material Participant Shares Analysis for 2002 illustrates the percent of material redeemed by participant type including recycling centers and reverse vending machines (RC/RV), Curbside Programs (CS), and Collection and Dropoff and Community Service Programs (CP/SP) for Calendar Year 2002.

Table 2. CRV Material Participant Shares Analysis For 2002

	ALUMINUM	GLASS	#1 PET	#2 HDPE	#3 PVC	#4 LDPE	#5 PP	#6 PS	#7 OTHER	BIMETAL
RC/RV	91%	68%	68%	30%	100%	100%	68%	100%	86%	98%
CS	7%	28%	27%	64%	0%	0%	32%	0%	14%	2%
CP/SP	2%	4%	5%	6%	0%	0%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 3. Postfilled Material Participant Shares Analysis for 2002 illustrates the percent of non-redemption material collected by participant type for Calendar Year 2002.

Table 3. Postfilled Material Participant Shares Analysis For 2002										
	ALUMINUM	**GLASS**	**#1 PET**	**#2 HDPE**	**#3 PVC**	**#4 LDPE**	**#5 PP**	**#6 PS**	**#7 OTHER**	**BIMETAL**
RC/RV	48%	11%	13%	3%	100%	100%	100%	100%	100%	80%
CS	48%	79%	74%	85%	0%	0%	0%	0%	0%	20%
CP/SP	4%	10%	13%	12%	0%	0%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

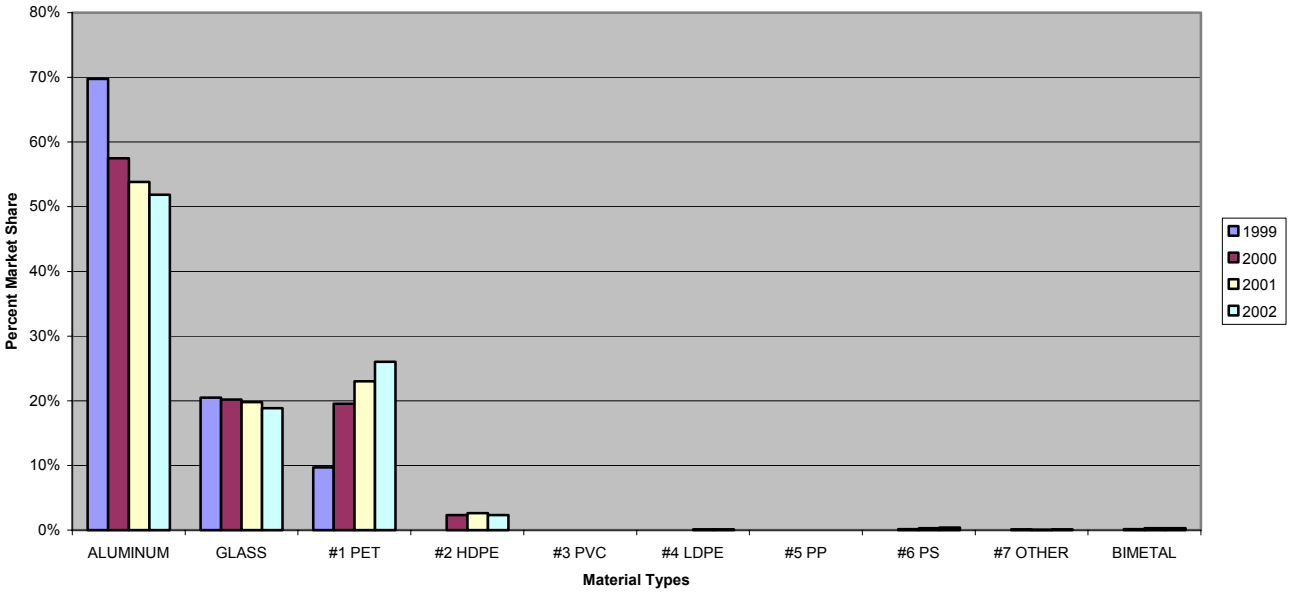
The primary factor illustrated by participant shares analysis is the impact of CRV on the mode of collection. Material that is light and easy to handle such as aluminum and that has CRV will be primarily brought to redemption centers where consumers can receive the CRV. Material that is heavier or less easy to handle such as glass, #1 PET, or #2 HDPE will have a larger component collected by donation programs such as curbside programs, collection and dropoff programs, and community service programs. In the case of postfilled material, a larger percentage is likely to be collected through donation programs.

In the past we have seen that contrary to trends in other material types, both CRV and postfilled material for plastics #3 - #7 and bi-metal were returned exclusively through redemption centers. However we are now seeing a change in that trend as a larger percentage of these CRV material types are being returned through curbside programs than in the previous year.

Changes in Market Share and its Impact on the Overall Recycling Rate
Traditionally, aluminum has always had the largest market share per sales volume compared to other material types and the All Materials recycling rate generally followed the same trend as aluminum. However, in the past three years since the inclusion of new beverages and container types in the Program, we are seeing a slight drop off of aluminum market share and a slight gain in that of #1 PET. The result of this transition is that the high-recycling rate of aluminum has a reduced degree of impact on the All Materials recycling rate and the lower-recycling rate of #1 PET has a greater degree of impact on the All Materials recycling rate than it did prior to the passage of SB 332.

Chart 3. Market Share of Beverage Container Sales from 1999 through 2002 illustrates a transition of market share for beverage containers from aluminum to #1 PET based on market changes and the changes in the definition of a beverage container. The chart also illustrates the very limited market share of material types other than aluminum, glass, and #1 PET plastic.

Chart 3. Market Share of Beverage Container Sales from 1999 through 2002



Impact of Adding Plastics #3 - #7 to the Beverage Container Recycling Program
In January of 2000, when the new beverages were added into the Program they brought with them new containers also, namely plastics #2 HDPE, #3 PVC, #4 LDPE, #5 PP, #6 PS, and #7 Other. The #2 HDPE plastic already had an established market and was being collected by many curbside programs for which they had received a scrap payment only. Adding HDPE to the Program did not require extensive adjustments to be collected. The material maintained respectful recycling rates of 22 percent in 2000, 39 percent in 2001 and has grown to 42 percent in 2002.

The plastics #3 - #7, however, had not been commonly collected previously and therefore had limited, if any, established markets. However, they are sold in limited volumes, each having less than 1 percent of the market share of beverage containers. Even if 100% of the #3 - #7 beverage containers sold were redeemed in 2002, it would not change the All Materials recycling rate by more than 1 percent. Therefore, although the Department continues to work to raise awareness of the recyclability of these containers and to establish markets for them, their low recycling rates are not causing any significant reductions in the overall recycling rate.

Departmental Actions to Increase Recycling Rates

- Following the Governor's signing of SB 332, the Department implemented a public education and outreach campaign to inform Californians about the new beverage containers included in the Program and, ultimately, raise the overall recycling rate for aluminum, glass, plastic and bimetal containers.

- To leverage its media outreach, the Department heavily advertises its toll-free information hotline *(1-800-RECYCLE),* and its Web sites *(http://www.conservation.com/dor and www.bottlesandcans.com),* to all media contacts. These sources are updated regularly to provide consumers and Program participants with the latest information on Program expansion, particularly what products are "in" or "out" of the Program. Both sources are used extensively.

- In 2002 the Department conducted a study to assess the primary sources for unredeemed containers. Broad sectors that lack sufficient opportunities for beverage container collection include the commercial sector, apartment complexes and rural areas.

- Using the principles of social marketing, the Department seeks not only to raise awareness of recycling, but also to alter public perception and action where recycling is concerned. A new campaign beginning in 2003, intends to create awareness of the need for convenient recycling opportunities at public venues and commercial establishments.

Biannual Report of Beverage Container Sales, Returns, Redemption & Recycling Rates

Table 1
May 10, 2003

RECYCLING
CALIFORNIA CONSERVATION

RATES			CONTAINERS			
ALUMINUM	**Redemption**	**Recycling**	**Sales***	**Recycled**	**Refillable**	**Postfilled**
JULY - DEC 2002	70	70	5,117,738,002	3,592,569,402	0	49,310,002
JAN - JUNE 2002	79	79	4,303,156,814	3,378,585,046	0	36,679,346
JULY - DEC 2001	70	70	5,229,928,476	3,674,003,411	0	43,996,536
JAN - JUNE 2001	80	80	4,196,752,969	3,362,768,981	0	31,407,467
JULY - DEC 2000	70	70	5,330,813,136	3,722,519,545	0	34,015,256
GLASS						
JULY - DEC 2002	53	47	1,879,713,609	882,526,227	233,617	151,473,485
JAN - JUNE 2002	66	59	1,547,044,854	906,330,107	146,840	162,534,721
JULY - DEC 2001	57	50	1,916,863,937	949,198,970	243,260	184,157,045
JAN - JUNE 2001	68	59	1,552,645,762	919,355,723	135,192	178,210,962
JULY - DEC 2000	55	49	1,891,692,603	924,410,199	805,757	161,943,422
#1 PET						
JULY - DEC 2002	32	32	2,750,648,550	882,355,419	0	52,822,430
JAN - JUNE 2002	41	41	1,982,107,978	805,230,416	0	53,267,278
JULY - DEC 2001	33	32	2,363,231,556	764,118,077	0	59,509,567
JAN - JUNE 2001	41	40	1,669,529,586	671,482,950	0	53,021,598
JULY - DEC 2000	32	32	2,061,431,436	651,295,732	0	41,327,420
#2 HDPE						
JULY - DEC 2002	111	41	220,046,220	89,740,194	0	158,756,725
JAN - JUNE 2002	126	44	207,025,906	91,726,397	0	172,752,313
JULY - DEC 2001	106	38	240,794,928	91,189,617	0	167,668,660
JAN - JUNE 2001	116	40	216,780,334	85,951,431	0	168,896,575
JULY - DEC 2000	97	24	243,801,726	57,971,952	0	181,201,586
#3 PVC						
JULY - DEC 2002	1	0	1,822,200	6,304	0	4,702
JAN - JUNE 2002	1	1	1,696,523	13,616	0	940
JULY - DEC 2001	2	2	1,525,079	27,827	0	3,116
JAN - JUNE 2001	1	1	1,994,685	23,663	0	1,056
JULY - DEC 2000	3	3	1,235,149	31,609	0	5,921
#4 LDPE						
JULY - DEC 2002	.26	.04	4,766,384	1,845	0	10,402
JAN - JUNE 2002	0	0	8,912,638	572	0	21
JULY - DEC 2001	1.05	.08	10,445,403	8,742	0	101,014
JAN - JUNE 2001	.19	.03	3,620,764	896	0	5,850
JULY - DEC 2000	.06	.05	440,603	219	0	46

(Continued on next page)

Biannual Report of Beverage Container Sales, Returns, Redemption & Recycling Rates

Table 1
May 10, 2003

RATES	*CONTAINERS*

#5 PP	Redemption	Recycling	Sales*	Recycled	Refillable	Postfilled
JULY - DEC 2002	1	1	778,424	5,428	0	4,982
JAN - JUNE 2002	3	3	329,181	11,109	0	76
JULY - DEC 2001	3	1	311,584	4,339	0	5,078
JAN - JUNE 2001	15	15	202,710	30,383	0	1,016
JULY - DEC 2000	24	23	338,920	79,015	0	2,528
#6 PS						
JULY - DEC 2002	.08	.06	39,158,064	23,432	0	9,116
JAN - JUNE 2002	.01	.01	34,232,364	3,267	0	28
JULY - DEC 2001	.04	.01	33,475,821	1,920	0	12,955
JAN - JUNE 2001	.23	.23	16,381,131	37,839	0	900
JULY - DEC 2000	.05	.03	13,952,545	4,411	0	2,478
#7 OTHER						
JULY - DEC 2002	.28	.23	11,779,596	26,698	0	7,793
JAN - JUNE 2002	.19	.17	8,764,828	14,536	0	2,738
JULY - DEC 2001	.14	.12	7,464,111	8,660	0	2,366
JAN - JUNE 2001	.55	.33	3,378,467	11,160	0	7,746
JULY - DEC 2000	1.06	.84	6,483,173	54,359	0	16,82
BIMETAL						
JULY - DEC 2002	2	2	29,884,139	502,061	0	131,736
JAN - JUNE 2002	1	1	26,512,803	282,983	0	24,266
JULY - DEC 2001	1	1	25,472,416	269,414	0	79,338
JAN - JUNE 2001	1	1	22,374,473	253,706	0	85,656
JULY - DEC 2000	1.31	1.12	18,197,018	203,617	0	45,817
ALL MATERIALS						
JULY - DEC 2002	56	54	10,056,335,188	5,447,757,009	233,617	412,531,372
JAN - JUNE 2002	66	64	8,119,783,889	5,182,198,050	146,840	425,261,726
JULY - DEC 2001	58	56	9,829,513,311	5,478,830,976	243,260	455,535,674
JAN - JUNE 2001	68	66	7,683,660,881	5,039,916,731	135,192	431,638,827
JULY - DEC 2000	58	56	9,568,386,309	5,356,570,659	805,757	418,561,300

CALCULATION OF REDEMPTION AND RECYCLING RATES

A = number of empty beverage containers returned
B = refillables returned
C = postfilled food or drink packaging containers returned
D = number of beverage containers sold

Redemption Rate $= \dfrac{A + B + [C - (0.05 \times (A + B))]}{D}$

Recycling Rate $= \dfrac{(A+B)}{D}$

(The value in brackets [ ] is included only when greater than zero.)

CONTAINER PER POUND RATES (CRV/POSTFILLED)	ALUMINUM	GLASS	#1 PET	#2 HDPE	#3 PVC	#4 LDPE
JUL - DEC 2002	29.6/33.21	1.86/.99	10.9/5.4	5.1/5.15	11.5/NA	42.7/NA

CONTAINER PER POUND RATES (CRV/POSTFILLED)	#5 PP	#6 PS	#7 OTHER	BIMETAL
JUL - DEC 2002	9.0/NA	69.8/NA	4.8/NA	5.9/NA

FOOTNOTE: ** Because of the delay between the time a container is distributed for sale and the time it is returned for recycling, the Department has determined the average "return time" as two months. The sales shown reflect this lag.*

CALENDAR YEAR - REDEMPTION AND RECYCLING RATES

Table 2
May 10, 2003

Rates			*Containers*			*1 of 3*
ALUMINUM	**Redemption**	**Recycling**	**Sold**	**Recycled**	**Refillable**	**Postfilled**
2002	74	74	9,420,894,816	6,971,154,448	0	85,989,348
2001	75	75	9,426,681,445	7,036,772,391	0	75,404,003
2000	76*	76*	9,521,709,518	7,086,969,721	0	73,859,460
1999	80	80	9,189,990,393	7,348,438,576	0	155,372,430
1998	80	80	9,273,717,898	7,381,508,007	0	178,559,988
1997	80	80	9,192,062,677	7,391,944,684	0	206,552,057
1996	80	80	9,046,339,201	7,257,109,422	0	157,451,082
1995	84	84	8,996,915,732	7,565,437,626	0	293,381,456
1994	82	82	9,640,060,625	7,859,363,654	0	150,118,131
1993	84	84	9,473,124,532	7,926,540,025	0	214,496,528
1992	85	85	9,849,092,574	8,378,479,015	0	204,306,718
1991	85	85	9,735,460,863	8,235,715,915	0	170,214,314
1990	76	76	9,859,752,871	7,478,135,392	0	153,794,134
1989	64	64	9,231,958,871	5,940,283,700	0	49,407,050
1988	62	61	8,829,125,615	5,416,522,775	0	358,327,175
GLASS						
2002	59	52	3,426,758,463	1,788,856,334	380,457	314,008,206
2001	62	54	3,469,509,699	1,868,554,693	378,452	362,368,007
2000	60*	54*	3,342,291,557	1,828,493,003	4,193,806	315,211,767
1999	71	60	2,699,056,360	1,563,428,698	56,547,053	381,756,617
1998	75	63	2,547,082,395	1,533,478,471	78,152,008	379,486,791
1997	79	67	2,488,007,100	1,575,406,811	90,836,718	383,973,447
1996	82	69	2,432,063,268	1,574,020,543	102,421,509	400,541,247
1995	86	74	2,477,905,727	1,731,621,270	111,828,496	376,815,597
1994	84	73	2,554,889,789	1,735,423,078	125,310,440	384,421,672
1993	86	75	2,524,975,195	1,753,023,220	147,140,942	369,469,526
1992	95	72	2,638,669,944	1,718,900,206	168,996,240	718,914,546
1991	85	71	2,837,961,367	1,802,801,890	198,954,148	508,723,118
1990	60	57	3,252,914,365	1,644,555,614	215,792,631	183,272,912
1989	45	40	3,136,247,664	945,069,624	304,045,641	216,179,258
1988	44	35	3,165,716,125	664,948,766	441,803,396	324,349,294
#1 PET						
2002	36	36	4,732,756,528	1,687,585,835	0	106,089,707
2001	37	36	4,032,761,142	1,435,601,027	0	112,531,165
2000	34*	34*	3,239,139,000	1,181,701,068	0	73,332,339
1999	79	65	1,278,411,247	829,974,260	0	223,909,692
1998	69	57	1,284,678,834	731,421,805	0	193,778,325
1997	69	58	1,206,774,464	698,322,157	0	168,565,032
1996	69	59	1,028,068,545	607,521,858	0	127,904,829
1995	74	64	760,783,391	488,882,966	0	99,011,197
1994	80	71	605,667,834	429,468,272	0	77,573,604
1993	76	70	577,329,580	403,344,084	0	58,323,616
1992	75	68	549,907,144	371,540,845	0	58,814,794

(Continued on next page)

	Redemption	Recycling	Sold	Recycled	Refillable	Postfilled
#1 PET (Continued)						
1991	58	56	530,597,819	299,758,173	0	20,829,383
1990	31	31	558,856,452	171,828,692	0	8,298,647
1989	7	7	556,680,692	37,863,612	0	1,221,987
1988	5	4	560,093,605	24,327,749	0	2,971,618
#2 HDPE						
2002	118	42	427,072,126	181,466,591	0	331,509,039
2001	110	39	457,575,262	177,141,048	0	336,565,235
2000	98*	22*	385,191,241	93,243,804	0	345,788,475
#3 PVC						
2002	1	1	3,518,723	19,920	0	5,642
2001	2	1	3,519,764	51,490	0	4,172
2000	2*	2*	2,259,829	46,244	0	9,514
#4 LDPE						
2002	.09	.02	13,679,022	2,417	0	10,423
2001	.82	.07	14,066,167	9,638	0	106,864
2000	.03*	.03*	893,623	228	0	47
#5 PP						
2002	2	1	1,107,605	16,537	0	5,057
2001	8	7	514,294	34,721	0	6,094
2000	10*	10*	811,660	79,025	0	2,529
#6 PS						
2002	.05	.04	73,390,428	26,699	0	9,144
2001	.10	.08	49,856,952	39,758	0	13,855
2000	.25*	.25*	26,362,287	66,534	0	3,281
#7 OTHER						
2002	.24	.20	20,544,424	41,234	0	10,531
2001	.27	.18	10,842,578	19,820	0	10,112
2000	.67*	.54*	14,656,909	80,409	0	23,362
BIMETAL						
2002	2	1	56,396,942	785,045	0	156,002
2001	1	1	47,846,889	523,120	0	164,993
2000	1*	1*	25,093,499	297,767	0	63,323
1999	11	11	2,270,648	260,797	0	15,370
1998	13	13	2,088,892	264,603	0	10,246
1997	19	19	2,252,193	432,794	0	27,375
1996	17	17	2,230,519	388,095	0	29,890
1995	21	21	2,268,190	484,539	0	21,375
1994	17	17	2,506,373	430,610	0	10,470
1993	19	19	3,655,432	683,945	0	16,945
1992	12	12	6,453,684	796,519	0	42,330
1991	14	14	6,353,803	878,207	0	59,958
1990	3	3	10,529,837	314,760	0	34,415
1989	2	2	10,643,975	199,890	0	354,570
1988	0.17	0.17	7,683,421	13,237	0	300

	Redemption	Recycling	Sold	Recycled	Refillable	Postfilled
ALL MATERIALS						
2002	60	58	18,176,119,077	10,629,955,059	380,457	837,793,099
2001	62	60	17,513,174,192	10,518,747,707	378,452	887,174,501
2000	62*	61*	16,558,409,123	10,190,977,803	4,193,806	808,294,098
1999	76	74	13,169,728,648	9,742,102,332	56,547,053	761,054,109
1998	76	74	13,107,568,019	9,646,672,886	78,152,008	751,835,350
1997	78	76	12,889,096,434	9,666,106,446	90,836,718	759,117,911
1996	78	76	12,508,701,533	9,439,039,918	102,421,509	685,927,048
1995	83	81	12,237,873,040	9,786,426,401	111,828,496	769,229,625
1994	80	79	12,803,124,621	10,024,685,614	125,310,440	612,123,877
1993	82	81	12,579,084,739	10,083,591,274	147,140,942	642,306,615
1992	85	82	13,044,123,346	10,469,716,585	168,996,240	982,078,388
1991	82	80	13,110,373,852	10,339,154,185	198,954,148	699,826,773
1990	70	70	13,682,053,525	9,294,834,458	215,792,631	345,400,108
1989	56	56	12,935,531,202	6,923,416,826	304,045,641	267,162,865
1988	55	52	12,562,618,766	6,105,812,527	441,803,396	685,648,387

***Due to the addition of new beverages on January 1, 2000 from the passage of SB332, the calculation of the redemption and recycling rates for 2000 was based on the sales and return data reported from March - December 2000. This is to account for the two month sales lag. However, the totals for the sales, recycled, refillable and postfilled columns are for January - December 2000.*